DOCUMENT RESUME

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PROJECT PLANNING GUIDE, EXPLANATION AND PROCEDURES (AS PART OF A TEN YEAR CONSTRUCTION PLAN).

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Project planning guides are required for every major capital improvement of California's junior colleges for which funds are requested for working drawings and/or construction for the project. This guide was developed to assist administrators and planners in justifying a proposed capital outlay project. The project planning guide permits the following--(1) subsequent planning, (2) evaluation of relative need among different projects, (3) provides a basis of agreement on the project's scope among the district administration, the state department of education, and the state department of finance. This document provides complete instructions, working definitions, processing procedures, and layouts for data collection forms necessary in the preparation of this project planning guide. Examples are given of the completed forms as well as complete instructions. This guide is to be completed by the district administrators and reviewed by both the department of education and the department of finance. Upon agreement by these groups, the district will be able to complete detailed programing and preliminary planning without further submittal of programing details to state agencies. (BH)

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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December 11, 1967

TO: Superintendents of Districts Maintaining Junior Colleges

FROM: Archie L. McPherran, Acting Chief
Division of Higher Education

SUBJECT: Junior College Construction Act of 1967
Submission of Proposed Projects as Part of Ten-Year
Construction Plans

The Junior College Construction Act of 1967 (Division 14, Chapter 19, Sections 20050 through 20083, of the California Education Code) provides that any junior college district may submit to the California State Department of Education for review and approval a proposed project. Such submission is mandatory in order to qualify for funds under this act. Each project shall be an element of the district's ten-year plan for capital construction.

Under the procedures formerly followed in reviewing individual projects with the State Department of Finance, the only submittal which explicitly described a project was a package of preliminary plans, specifications, and cost estimates. That procedure often allowed too little time for satisfactory resolution of basic points of issue and sometimes resulted in unfortunate consequences to the junior college involved.

The new procedure and schedule is intended to provide sufficient information and time to permit the district, the Department of Education, and the Department of Finance officials to reach firm and appropriate agreement on each project before preliminary plans are developed.

The planning process and timing for a project calls for the following schedule:

January 1, 1968 (prior to) - A proposed project submitted by the governing board of a junior college district to the Department of Education.

April 1, 1968 (on or before) - A proposed project submitted by the governing board of a junior college district to the Department of Education shall be acted upon by the Department and, if approved, transmitted to Department of Finance not later than April 1, 1968.

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July 1, 1968 (on or before) - A proposed project submitted to the Department of Finance shall be finally acted upon before the first day of July 1968.

October 1, 1968 (prior to) - Upon securing approval of a proposed project, the governing board of a junior college may submit preliminary plans to the Department of Education for approval. Preliminary plans for a project shall include detailed plans, specifications, and drawings, and all other data and information necessary to determine detailed cost estimates.

November 15, 1968 (on or before) - The Department of Education shall review and evaluate preliminary plans for a project and shall finally either approve or disapprove the same.

Approved preliminary plans shall be transmitted to the Department of Finance not later than November 15, 1968. Following the above procedure, the Department of Finance shall review preliminary plans for a project as approved and submitted to it by the Department of Education, and the estimated state and district shares in the funding thereof as determined by the Department of Education.

With Department of Finance approval of preliminary plans, the state's share of the funding for a project for the first fiscal year (1969-70) shall be included in the 1969-70 budget and Budget Bill submitted to the Legislature.

Instructions for preparation and submittal of your project proposal(s) for the Junior College Construction Act of 1967 are attached. These documents cover the information required in Education Code Section 20075.

Guidance or assistance from the Bureau of Junior College Administration and Finance regarding the preparation and/or submittal of the Project Planning Guide(s) may be secured within the limited time of our staff during the course of developing the material required.

Five copies of each Project Planning Guide are to be submitted to this office by January 1, 1968. The format for the component parts of the material to be submitted is covered in the attached explanation and procedures.

Enclosed herewith is one copy of the BD-240 Provisional, Ten-Year Junior College Capital Outlay Projections for your district, as revised by the Department of Finance, reflecting only the first and third census week data used to determine the annual average Weekly Student Contact Hours (WSCH) of day-graded students.

ALM:ER:jh
Attachment

California State Department of Education
Division of Higher Education
Bureau of Junior College Administration and Finance
721 Capitol Mall
Sacramento, California 95814

PROJECT PLANNING GUIDE, EXPLANATION AND PROCEDURES

A Project Planning Guide is a document which systematically justifies and describes a proposed capital outlay project. Recording all factors and conditions relative to a project, the Project Planning Guide does the following:

1. Guides subsequent planning. The project's goals, functions, and nature are expressed in the guide, where they serve as a firm, approved reference against which plans can be checked.

2. Permits evaluation of relative need among projects. Development of sound capital outlay programs depends upon consideration of the kinds of information presented in the Project Planning Guide.

3. Serves as the basis of agreement on the project's scope among the district administration, the State Department of Education, and the State Department of Finance.

The Project Planning Guide is the sole planning document other than preliminary plans and working drawings which is subject to review above the district level, and agreement on the Project Planning Guide by the Department of Education and the Department of Finance is expected to mean that the need and scope have been settled. Upon agreement on the guide, the district will complete the detailed programming and preliminary planning without further submittal of programming details. Preliminary plans will continue to be subject to review and actions by the Department of Education and the Department of Finance, in accordance with long-standing practice.

A Project Planning Guide is required for every proposed major capital improvement for which funds are requested for working drawings and/or construction for that project in the fiscal year 1969-70. A project is referred to as being "in" the fiscal year in which the working drawings are proposed to be funded. The guide, be it for construction, remodeling, site acquisition (including development), equipment, or whatever, should be organized so factors of justification are set forth clearly and concisely, that all relevant planning bases are presented, that all features of the project on which there are policies are adequately defined to ensure compliance with those policies, and that the size and estimated cost of the project are presented.

The following is a recommended outline of the content of a Project Planning Guide for a <u>building project</u>:

A. Narrative description of project, covering:

1. The general objectives of the project;

2. Projected size, assignable and outside gross area proposed;

3. Location with reference to campus' long-range development plan;

4. Secondary effects of project corresponding to introduction, transfer, or demolition of space;

5. Special features of project.

B. Narrative description and discussion of planning bases, covering:

1. Summary schedules of projected growth of instruction load, instructional staff, or other parameters of space needed;

2. Historical perspective;

3. Objectives and nature of activities to be housed, related to types of space proposed.

C. Forms:

1. JCAF-32: Budget Outline

2. JCAF-31: Summary of Proposed Spaces

3. JCAF-30: Summary of Existing and Proposed Areas

4. JCAF-29 (for academic building only): Area Needs for Departments of Instruction (According to Standards)

5. JCAF-20: Space Adequacy Survey (Attach a summary of a Space Adequacy Survey if it is applicable to the project.)

6. BD-240 Supplement: Attach a copy of Department of Finance BD-240 Provisional, Ten-Year Junior College Capital Outlay Projections.

The six forms are numbered in reverse order of the Project Planning Guide's development to put the end-products, the cost estimate and summary of spaces, first. For convenience, they will be discussed here in the order of use in the guide's development.

<u>BD-240 Supplement: Provisional, Ten-Year Junior College Capital Outlay</u> Projections

Form BD-240 Supplement as prepared by the Department of Finance, Education Code Section 20066(b), shall be the basis for your proposal (Education Code Section 20066). Enclose a copy of this form as prepared by the Department of Finance for each district.

JCAF-20: Space Adequacy Survey

Form JCAF-20, Space Adequacy Survey, is a detailed expression of projected teaching loads and space needs by department and/or subject field involved in the proposed building or for the total campus.

Instructions for the preparation of the Space Adequacy Survey, Form JCAF-20, are attached.

Prepare the Space Adequacy Survey on the basis of the target date of the project which is established as two (2) years beyond date of occupancy (e.g., Fall 1972 for projects expected to be occupied in Fall 1970). The fall semester of the target year is used (instead of a whole fiscal year average) as a basis of planning; therefore, all data will be reported on fall semester (or quarter) data of the current and target year. Should there be cogent reason for submittal of spring data, it is to be reported separately from the fall data.

JCAF-29: Area Needs According to Standards for Departments of Instruction

Form JCAF-29 presents instructional load and instructional staff figures pertinent to the proposed academic building, and shows computed area needs based on the Coordinating Council for Higher Education (CCHE) standards (which are also part of the California Administrative Code, Title 5) for classrooms, seminar rooms, teaching laboratories, and office space. The Appendix, pages A-1 through A-3 of this set of materials, present the CCHE standards.

The fall semester (or quarter) selected to show actual Weekly Student Contact Hours (WSCH) and Instructional Staff (FTE), Column 3, should be the last one for which complete, final figures are available. The deadline for submittal of the Project Planning Guide will normally be shortly after a fall registration, when data for that fall may still not be firm, so that the actual figures used may correspond to those of the previous fall. The purpose of the actual figures is merely to give perspective to the projected expansion.

JCAF-30: Summary of Existing and Proposed Areas

Form JCAF-30 summarizes the building proposal by grouping the types of space, shows the extent to which the occupants will continue use of their existing space, and gives the proposed total space to be used by the occupants.

JCAF-31: Summary of Proposed Spaces

Form JCAF-31 lists the spaces programmed for the proposed building. Individual spaces are to be specified for classrooms, seminar rooms, teaching laboratories, staff offices, and whatever other spaces can be determined with relative security at this stage of planning. Lumping of other spaces within the total area justified for the project is permissible insofar as it is reasonable to expect such spaces to be programmed in detail only in later stages of planning. The footnotes on Form JCAF-31 indicate grouping of types of space which are to be followed to the extent detail can be given.

The Architect(s) for the project(s) will submit as part of the Preliminary Plans and Specifications, reproductions of the Project Planning Guide - Summary of Proposed Rooms (JCAF-31), with columns 8, 9, and 10 completed in accordance with their Schematic and/or Preliminary Drawings.

Additions to or deletions from the districts' proposed schedule (columns 1 through 7) of assignable rooms, as approved, including all addenda thereto, will be clearly identified as such, categorized as to type of space, and be given a departmental assignment. The Bureau of Junior College Administration and Finance will advise where necessary on these matters.

Assignable spaces (those listed in the Summary of Rooms) will be numbered on the Schematic and/or Preliminary Drawings as indicated in column 2 of the Summary of Rooms.

Two copies of the Schematic and/or Preliminary Drawings, Project Planning Guide (with columns 8, 9, and 10 completed), and Form 2A (Program of Building Areas - Basic Plans) will be submitted to the Department of Education, Bureau of Junior College Administration and Finance, according to the schedule outlined in the letter of transmittal of these instructions.

The complete room summary is essential to the Department of Education as (1) a review document for insuring compliance with the intent or scope of the Project Planning Guide as approved; and (2) source material for long-range physical plant planning.

The Executive Architect should consider all proposed space (room) areas, including the total Assignable Square Feet (ASF), as maximum, unless justifiable design considerations indicate otherwise.

At the time of preparation of the preliminary plans or working drawings, if the project increases (or decreases) in square footage over that approved in the planning guide, or changes are made in the numbers and kinds of assignments of rooms, or if the scope or intent of the project has changed, an addendum to the Project Planning Guide must be filed in order that we may gain the concurrence of the Department of Finance to the proposed changes to the program scope. Minor changes usually encounter no difficulty, and a letter is sufficient. Where the changes are of a more substantial nature, however, an addendum is required containing a revised summary of rooms (or other measurements of scope) and a written explanation of why these changes were made.

It is the responsibility of the district to notify the Department of Education of any proposed change in the scope of the project throughout the life of the project.

JCAF-32: Budget Outline

The form of all construction project budgets shall be as attached hereto as JCAF-32. This form is substantially as established by previous correspondence for Entitlements 1 through 4, but modified from earlier revisions to reflect current practices.

A project may be composed of several building (new construction) and/or non-building (swimming pool, new campus site development, etc.) components. Therefore, in order to have meaningful unit cost figures as required in the budget outline under "Project Data", a separate budget outline is required for each such separately identifiable component of the project.

The "Handbook of Definitions" issued by the Bureau of Junior College Administration and Finance, California State Department of Education, 1967 Revision, will be used as determination of what spaces are to be categorized as assignable. (See Addendum B, pp. B-1 through B-5 of the "Handbook of Definitions.")

The budget outline is to facilitate development of the annual capital outlay program at the district and Department of Education levels.

Project Planning Guide Procedure

Procedure related to Project Planning Guides for projects requesting funding working drawings and/or construction in 1969-70:

1. Five copies of each Project Planning Guide (each separate copy bound in a loose leaf cover similar to a "duo tang" (No. 1258) or three-hole cover which fastens on the left margin of the material).*

2. Each Project Planning Guide will be subject to approval by the Department of Education and concurrence by the Department of Finance. When both requirements are met, the district will be notified. The goal will be to have reviews and actions on all Project Planning Guides completed before July 1.

3. All costs in the Budget Outline, Form JCAF-32, are to be at Engineering News Record Construction Cost Index specified for the fiscal year of building program in which the project is scheduled.

The scope of this project is established in the current ten-year construction plan, both as to budget and square footage (assignable and gross). At the time of submittal of the Project Planning Guide, should the ten-year construction plan square footage (assignable and gross for the project) vary by more than 2%, this should be noted in the project guide so that appropriate action may be taken.

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* Be sure to leave at least a one-inch (1") margin on left side of all forms and materials.

SAMPLE FORMAT

PROJECT PLANNING GUIDE - ACADEMIC BUILDING

District: _____ College: _____

Project: _____ Target Year*: _____

PROGRAM JUSTIFICATION

A. General Objectives and Purpose of Project

Give project description, project size (ASF and gross area), types of space, etc.

B. Basic Data

Projected enrollments, weekly student contact hours, FTE Instructional Staff, total campus enrollments, and other measures related to space standards and allowances.

C. Sources and Bases of Projections

Relate projections to master curriculum or academic plan projections.

Present status and projected development of subject field programs of proposed occupants, historical perspectives, program demands of local community.

D. Existing Facilities

Secondary effects and/or relation of this project to other projects. Disposition of existing space.

E. Comments on Space Requirements

Give particular reference to special spaces. Justification of necessary facilities not covered by space standards.

F. Master Site-Development Plan

Location of proposed building(s) in Master Site-Development Plan.

G. Factors to Consider in Planning

Schedule and timing of funds, construction, and occupancy.

H. Considerations Underlying the Space Proposal

Give brief historical development of project.

I. Summary

Evaluation of proposed project in terms of need and services. Include unique factors to permit evaluation of relative need among all projects submitted by junior college districts.

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* Target year = two (2) years beyond occupancy (i.e., 1972 for a project scheduled to be occupied in 1970).

SAMPLE FORMAT

PROJECT PLANNING GUIDE - LIBRARY

District: _____ College: _____

Project: _____ Target Year*: _____

PROGRAM JUSTIFICATION

A. Study Stations Allowance

% Student Credit Hours Devoted to Trade-Tech Courses	Stations as % of Full-Time Enrollment		Full-Time Enrollment	=	Standard No. of Stations Allowed	x	ASF per Station		
Over 10%	15%		_____						
9 to 10	16		_____						
7 to 8	17	x	_____	=	_____	x	25	=	_____ ASF allowable student study space
5 to 6	18		_____						
3 to 4	19		_____						
Under 3	20		_____						

B. Bound Volume Allowance:

Projected bound volumes for target year*: _____ vols.
Bound volume allowance at 1 sq. ft. per 10 volumes.

(No. of bound vols.) x (0.10 Assignable Sq. Ft. per Vol.) = _____ ASF allowable bound-volume space

C. Library Services Allowance:

Projected FTE Library Staff (incl. professional, clerical, and student assistance): _____ FTE

Basic Component (400 ASF) + (140 ASF per FTE Lib. Staff) = _____ ASF allowable library service space

D. Total Allowable Library Space (A + B + C above) _____ ASF

E. Existing Library Space (total) _____ ASF

F. Additional Allowable Under Standards (D minus E above) _____ ASF

Total Library Space Proposed This Project _____ ASF

Total Other Space Proposed (i.e., Audio Visual, etc.) _____ ASF

Grand Total Assignable Sq. Ft. Proposed This Project _____ ASF

* Reasonable Minimum Target Year = three (3) years beyond occupancy (i.e., 1973 for project scheduled for occupancy in 1970).

Projects Other Than Buildings

For some projects (e.g., land or site acquisition and certain utilities and site development projects), it may not be possible for you to provide anything in the way of a simple, tabular summary of such planning bases as projected instructional (WSCH) loads, projected staffs, and unit quantities of space or other physical facilities, but merely a brief verbal description of the needs to be met and the projects' general features. In any event, however, the Project Planning Guide should be both as brief and as explicit as possible, whether submitted by itself as an indication of planning bases which may involve questions of policy or submittal to an architect as part of a project program.

Utilities and Engineering

Recommended content for Utilities and Engineering Projects:

1. Each component of the project is to have a separate detailed description and justification corresponding to an item cost breakdown.

2. State all timing factors involved in each component part of the project. State what buildings the utility or facility will serve and the corresponding timing requirements.

3. Include color-coded line diagrams of utilities items (on 8½- x 11-inch pages). Good, clear graphic data is a key part of the Project Planning Guide for this type of project.

4. The same key should be used throughout; that is, if a water line is called item (A) in the budget, it should be called item (A) in the description and in any keys used in the drawings.

5. Form JCAF-32 Budget Outline will be completed using the ENR Cost Index specified for the fiscal year of the building program in which project is scheduled.

Land or Site Acquisition

Land or site acquisition proposals shall include the following kinds of information:

1. Relation of proposed site to Master Plan of the district for ultimate enrollment.

2. Maximum proposed campus size expressed in terms of day-graded enrollment (per district Board policy).

3. Total acreage of proposed site.

4. Net usable acres available from site.

5. General topography (i.e., level, sloping, steeply sloping, etc.). Describe and include comments about possible site development problems which might result from difficult topography.

6. Soil tests. Have test borings been made? Results? Include a copy (submittal of only one copy in original application is necessary) of report of Soils Engineer, or professional statement signed by Soils Engineer, if available.

7. Utilities. Indicate distance to nearest lines of suitable size or capacity, of water, sewer, gas, electricity, storm drain.

8. Distance from site to nearest suitable traveled way (major access).

9. Indicate adjacent streets and road conditions.

10. Description of surrounding development.

11. Comments on climate, atmospheric conditions, noise, aesthetics, etc.

12. Estimated value of proposed site. Include any unpaid utility-type bonds (drainage, street bonds, etc.) as part of cost and identify amounts involved by type of and parcel. Appraisals should accompany application and will be required before funds are budgeted. If appraisals are not available, then the best possible evidence must accompany the project application. Such evidence might consist of records of land sales, statements of reputable realtors, values placed by county assessor, and the like.

13. Comments on site improvements cost factors (i.e., on-site grading, excavation or fill, special soil condition affecting footings, drainage systems required, removal of existing construction, special problems of obtaining utility services, need for special off-site work, etc.).

14. Time schedule for site purchase, development of plans, and date of occupancy.

15. Comments on source and/or method of funding purchase of site.

16. When several sites are under consideration (one of which will be selected), the information noted above should be answered for each site.

17. Submit a copy of the site approval by the Department of Education, Bureau of Junior College Administration and Finance, together with the jurisdictional City and/or County Site Approval documentation, as required by current policy and procedure.

If, in your considered opinion, supplying certain of the items of information regarding site or land acquisition would tend to adversely affect the proposed project (i.e., escalation of costs, condemnation and severance, etc.), please so indicate.

Provide as much other information as will help in defining the proposal to insure the planning base is sufficiently consistent with long-range academic and administrative plans, with general planning standards or guides as may exist, and with comparable land costs, that the project can reasonably be expected to fulfill its purpose when purchased.

SAMPLE FORMAT

PROJECT PLANNING GUIDE - LAND OR SITE ACQUISITION

District: _____ College: _____

Project: _____

GENERAL DESCRIPTION

A. Purpose

(Include a brief general statement of the proposed use of the land to be acquired.)

B. Background

Describe the present use of the land, any historical background which may give a more thorough understanding of the property, the relationship between the project and any previous or future land acquisitions, the number of parcels and ownerships, data about the types of existing improvements on specific parcels, and any other pertinent data which will provide a good understanding of the project. (See, also, list of kinds of information to be included.)

JUSTIFICATION

A. Schedule of Development

Item	
1. Land Acquisition	Budget Year 19__-19__
2. Working drawing funds	Budget Year 19__-19__
3. Construction funds	Budget Year 19__-19__
4. Occupancy date	Budget Year 19__-19__

B. Description of Need for Project or Proposed Use

(Include any other factors which further describe the need for the land in the year requested.)

C. Justification for Timing

(Describe need for occupancy date shown in schedule above.)

ESTIMATE OF COST

(Provide an estimate of cost for the total amount of property requested. State the basis of the estimate; i.e., recent sales in the area, tax assessments, etc.)

ATTACH A COPY OF CAMPUS MASTER PLAN (IF ONE HAS BEEN PREPARED) WITH PROPOSED LAND ACQUISITION IDENTIFIED.

Date: _____

SAMPLE FORMAT

PROJECT PLANNING GUIDE - INITIAL EQUIPMENT
(Explanation and Procedures)

District: _____ College: _____

Project: _____

For initial equipment, the procedure and format for preparation of supporting information is as follows:

1. Format

   A. Title page

   B. General description of project:

      (1) Building description, including building name, assignable square feet to be equipped at occupancy. Identify temporary occupants, assignable square feet to be occupied by each, and duration of occupancy. Indicate permanent occupants, assignable square feet to be occupied initially and ultimately in building. Give general building type (i.e., science building, classroom building, office building, etc.), and any special features of design or facilities which might affect equipment list.

      (2) Equipment budget description, indicate curriculum category and names of departments to be equipped--state any special features in department program which may call for a variance in normal equipment requirements. (Note: This type of generalized presentation to be used to support funding of movable equipment where preparation of an itemized list of required equipment is to be submitted at a subsequent date. In cases where this generalized presentation is used, it is expected that an itemized list of equipment to be acquired will be prepared and submitted on or before November 15, 1968.)

   C. Cost summary

   D. Room type summary (i.e., types of areas to be equipped)

   E. Statement of justification:

      (1) For overall equipment list

      (2) For equipment estimated to cost $1,000 or more (per unit)

      (3) For special or unusual quantity requests

      (4) For generally assignable office furniture requests (i.e., additional numbers of staff, etc.)

2. Estimated Cost of Equipment

Use the nearest dollar amounts to indicate the unit cost of equipment. Do not include the cents (unless large quantities are involved which would skew the total cost shown). Add the 5% sales tax to the total and indicate that it is included.

3. Presentation

Send the same number of sets of the equipment Project Planning Guide as are prepared for a building project (5). Enclose each set in paper binders. In addition to improving the appearance of the proposal, the binders prevent the possible loss of single sheets which tend to pull away from stapled material.

If it is expected that a portion of the equipment cost will be funded from a Federal grant, please indicate the amount and the schedule of timing (see attached form for Federal Funds).

4. Revisions

If revisions to equipment projects are necessary, the revised material should be assembled in sets, numbered in sequence, dated, and should include:

a. Revised title page

b. Revised cost summary

c. Revised room-type summary sheet

d. Preparation and distribution of the same number of sets as were issued originally

5. Funds other than State or Local

Equipment which will be obtained from funds other than State or Local (i.e., grants, gifts, etc.) and which will be installed in new or remodeled buildings should be included in the detailed equipment lists for the buildings to be submitted in November and should be identified as to source of funds.

DEFINITIONS OF EQUIPMENT

FIXED EQUIPMENT

Fixed equipment is usually included in construction contracts and installed within a space where the removal of such equipment will essentially render either the equipment or space unusable without reconstruction of either the space or equipment, for instance:

1. Where common walls are shared by equipment and the building, i.e., one or more walls of a "cold room"; or

2. Where the equipment is dependent upon the building for its installation and/or operation; i.e., attached to a wall or ceiling, not self-supporting, or supported by its own accessory; or

3. Where equipment is of such size as to prohibit its removal from the space without the demolition of the equipment or a wall of that space.

FURNITURE AND MOVABLE EQUIPMENT

Movable equipment is equipment which is transferable from location to location without destroying its usefulness or modifying the building, usually purchased through other than construction contracts, and which meets all of the following criteria:

1. Has a life expectancy of five years or more;

2. Has sufficient individuality and size to make control feasible by means of identification tags or numbers and/or manufacturer's serial or model numbers marked thereon;

3. Is self-contained for its primary function;

4. Is not purchased as a component part of any other piece of movable or fixed equipment;

5. Is not fixed as defined above.

SAMPLE FORMAT
(to be submitted
by November 15, 1968)

FURNITURE AND EQUIPMENT ITEMIZATION SHEET

Application Under 1969-1970 Capital Outlay Program

District: _____ College: _____

Project: _____

Approx. Units	Item	Approx. Unit Cost	Total Cost

Prepared by: _____ Date: _____

Page___of___pages

ENGINEERING NEWS RECORD (ENR) CONSTRUCTION COST INDEX

An important factor in the preparation, interpretation, and use of construction project budgets is the value of the Engineering News Record Construction Cost Index, better known as the "ENR" Cost Index (see attached Engineering News Record Construction Cost Indexes - 1913 = 100, from January 1945 to August 1967, inclusive.

For a project which is intended to be funded in part from State capital funds, in preparing the budget outline for submittal, the dollar values entered shall be based on an ENR value which will be established by the State Department of Finance and will be conveyed to the district through the State Department of Education, in separate correspondence, normally on an annual basis. Ordinarily, this will not be the current ENR, but one selected on a project basis for a future time. It has been determined that the ENR Index for all 1969-70 projects be set at 1170.

When each construction project is completed and the account containing the project funds is closed out, the initial budget shall be amended as may be required to show actual costs in each category and an information copy furnished the Bureau of Junior College Administration and Finance.

The following is an example of the application of the ENR Index:

Use current ENR Index of 1100

Projected ENR Index for 1969-70 of 1170

Estimated current Total Project Cost = $1,950,000

Therefore: 1170/1100 x $1,950,000 = $2,074,100 (total cost of project based on ENR 1170 rounded to nearest $100)

ENGINEERING NEWS RECORD
CONSTRUCTION COST INDEXES - 1913 = 100

(Revised October 3, 1963)

	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	AVER.
1945	302.5	303.7	304.5	306.4	307.4	309.0	309.0	309.1	309.3	309.3	309.3	313.5	307.8
1950	484.7	484.9	488.4	491.9	496.6	506.9	512.7	521.4	531.0	536.2	530.0	530.8	508.6
1955	643.7	645.2	645.7	647.5	653.3	656.0	660.1	672.2	672.7	673.9	673.2	673.1	659.9
1956	676.4	680.2	680.2	683.3	688.4	692.1	694.8	696.3	704.9	703.9	704.13	703.82	692.37
1957	707.90	710.06	708.64	709.3	715.70	721.36	724.15	738.63	737.78	737.14	737.48	738.08	723.85
1958	743.44	743.77	744.41	745.78	751.57	757.31	762.52	764.44	773.47	775.30	774.12	773.81	759.17
1959	778.28	778.75	781.35	784.41	790.37	795.16	806.69	811.15	812.56	811.40	809.78	808.63	797.38
1960	811.98	812.93	813.46	813.58	820.18	826.24	829.33	830.18	830.92	829.58	830.09	830.16	823.55
1961	834.32	834.27	834.16	837.58	847.32	850.38	853.64	854.09	854.01	854.48	855.35	854.97	847.05
1962	855.39	858.45	861.48	863.23	871.55	872.90	877.09	881.39	880.56	880.23	879.93	879.88	871.84
1963	882.67	882.99	884.23	884.80	894.31	899.08	908.92	914.33	913.75	915.49	913.52	914.70	900.96
1964	916.94	918.10	920.11	923.97	927.44	931.52	944.97	947.92	947.36	947.74	948.25	948.12	936.49
1965	947.56	957.43	957.70	957.43	957.92	969.34	977.14	984.16	986.29	986.29	985.83	987.74	971.22
1966	987.94	997.43	998.32	1006.06	1014.03	1028.65	1034.32	1037.11	1038.62	1037.29	1036.57	1037.52	1020.95
1967	1043.33	1044.90	1047.45	1047.61	1063.30	1072.02	1082.67	1093.34	1096.74	1100.85	1101.34		

NOTE: All values for 1962 were revised by additional .10 due to an error in reporting current prices.

FORM JCAF-32

PROJECT PLANNING GUIDE - BUDGET OUTLINE FOR 1969-70

District: _____ College: _____

Project: _____

Estimate of Cost (All Costs @ ENR 1170)

1.	Site		
	a. Purchase price of property	$_____	
	b. Appraisals	$_____	
	c. Costs incurred in escrow	$_____	
	d. Surveys	$_____	
	e. Other costs*	$_____	
	f. Total (acquisition of site)		$_____
2.	Plans		
	a. Architect's fee for plans	$_____	
	b. Office of Architecture, plans check fee	$_____	
	c. Jr. Col. Planning, plans check fee (1/20 of 1% of total project cost)	$_____	
	d. Preliminary tests	$_____	
	e. Other costs*	$_____	
	f. Total (plans)		$_____
3.	Construction		
	a. Utility services		$_____
	b. Off-site development, service*		$_____
	c. On-site development, service*		$_____
	d. On-site development, general*		$_____
	e. Reconstruction*		$_____
	f. New construction		$_____ a/
	(1) General Work	$_____	
	(2) Mechanical	$_____	
	(3) Plumbing	$_____	
	(4) Electrical	$_____	
	g. Other*		$_____
	h. Total (construction)		$_____
4.	Tests (construction)		$_____
5.	Inspection		$_____
6.	Contingencies		$_____
7.	Total building project (items 1 thru 6 above)		$_____ b/
8.	Furniture and movable equipment		$_____
9.	Total project cost (items 1 thru 8 above)		$_____

*Define with detail description on attachment.

Project Data	Totals	Ratio	New Constr. Unit Cost a/	Total Bldg. Project Unit Cost b/
Outside Gross Sq. Feet (OGSF)		1.00		
Assignable Sq. Feet (ASF)				

NOTE: Use an attachment to identify any special problem or conditions which are unique to the project, or for supplemental information in explanation of any of the above data, or for any other data necessary or pertinent to a complete understanding of the bases upon which this budget outline depends.

- - - -

FORM JCAF-31

PROJECT PLANNING GUIDE - SUMMARY OF PROPOSED SPACES

Campus: _____ Project: _____

DEPARTMENT AND TYPE OF SPACE*	EACH SPACE			ASSIGNABLE SQ. FT.			PRELIMINARY PLANS		
	Space No.	No. of Sta.	No. of Ident. Spaces	Each Space	Total Ident. Spaces	Total By Type of Spaces	No. of Spaces	Total ASF	(+) or (-) ASF
1	2	3	4	5	6	7	8	9	10
DEPARTMENT "X":									
Teaching Lab									
a. Whateverology	1	25	2	1000	2000				
b. Otherology	2	20	1	1000	1000	3000			
Teaching Lab Service									
a. Whateverostats	3	--	1	200	200				
b. Otherostats issue	4	--	1	300	300	500			
Office									
a. Faculty	5	1	10	80	800				
b. Chairman	6	1	1	100	100				
c. Department	7	2	1	140	140	1040			
Other									
a. Storage	8	--	1	90	90	90			
TOTAL DEPARTMENT "X"						4630			
DEPARTMENT "Y":									
(Itemization assumed here for simplicity to be same as for Department "X")									
TOTAL DEPARTMENT "Y"						4630			
GENERAL ASSIGNMENT AND JOINT USE:									
General Classroom									
a. Classroom	17	32	2	480	960				
b. Classroom	18	48	2	620	1240				
c. Classroom	19	80	1	880	880				
d. Prep room	20	--	1	300	300	3380			
Seminar	21	15	1	300	300	300			
TOTAL GENERAL ASSIGNMENT AND JOINT USE						3680			
TOTAL PROPOSED BUILDING						12940			

* List and arrange by types of space (classroom; classroom service; seminar; teaching lab; music practice; language lab; office-academic; administrative; shop; storage; other) within each department and with totals for each department, for general assignment and joint use space (classrooms; seminar rooms; lecture-demonstration rooms; branch library; other) and for the entire proposed building.

Columns 1-7 are to be completed and submitted with the Project Planning Guide. Columns 8-10 are for use in reconciling the Project Planning Guide to the Preliminary Plans.

Date Prepared for Project Planning Guide: _____ _____
(Form prepared by)

Date Prepared for Preliminary Plans: _____ _____
(Signature of District Architect)

FORM JCAF-30

PROJECT PLANNING GUIDE
SUMMARY OF EXISTING AND PROPOSED AREAS

DISTRICT: _____ COLLEGE: _____

PROJECT: (As listed in priority list for 10-Year Construction Plan)

Type of Space	ASSIGNABLE SQUARE FEET				
	Actual Fall 1967	Standard Need Projected	Proposed Project	Existing To Be Retained	Total Existing & Proposed
(1)	(2)	(3)	(4)	(5)	(6)=(4)+(5)
A. Space Covered by Standards					
1. Collegewide basis:					
a. Classroom and Seminar Rooms (101, 102 & 103)					
b. Office (301, 302, 303 & 304)					
c. Library (401, 402, 403, 404 & 405)					
Totals (Items 1a, 1b & 1c)					
2. Subject Fields (occupants proposed project):					
a. Teaching Labs & Teach Lab Serv (104 & 107)					
1200 Biological Sciences					
2400 Mathematics					
2600 Physical Sciences					
3000 Social Sciences					
6890 Other Trade Tech					
Totals (Item 2a)					
Totals Covered by Standards (Item A)					
B. Space Not Covered by Standards					
1. Subject Fields (occupants proposed project):					
a. Music Practice & Music Studio (108 & 109)					
b. Language Laboratory (110)					
c. Lab Research (200)					
d. Museum (406)					
e. General Use (500)					
f. General Service (600)					
g. Other Nonresidential (700)					
Totals (Item 1a through 1g)					
Totals Not Covered by Standards (Item B)					
GRAND TOTAL (Items A & B above)					

JCAF-30--contd.

FOOTNOTES--SUMMARY OF EXISTING AND PROPOSED AREAS

Columns 2 and 3:

A. Space Covered by Standards

Entries for classroom, seminar rooms, office, and teaching laboratories (by subject field) should be taken from columns 5 and 6 of Form JCAF-29, titled "Area Needs for Departments of Instruction."

Entries for "Library" should be taken from Form JCAF-28, Supporting Detail for Library Facilities for Continuing Ten-Year Construction Plans, as submitted on or before November 1, 1967. See also the Project Planning Guide for Library Format (these instructions).

B. Space Not Covered by Standards

Entries in column 2 shall be derived from space records for the occupants of the proposed project.

Entries in column 3 should be based on your estimate of space (by type) needed two (2) years beyond date of occupancy for the occupants of the proposed project. Since no standards have been developed for these types of space, base your estimates on the best factual evidence at hand.

Column 4:

Entries here (by type of space) shall be taken from Form JCAF-31, Summary of Proposed Spaces.

Column 5:

Entries here (by type of space) shall be taken from space records of existing, funded, or other proposed projects which will have space assigned to the occupants of this proposed project at the completion. Show only those spaces (by type) to be retained, taking into account "secondary effects" of space changes.

Column 6:

Entries here are simply the sums of entries in columns 4 and 5.

PROJECT PLANNING GUIDE
AREA NEEDS FOR DEPARTMENTS OF INSTRUCTION (According to CCHE Standards)

DISTRICT: _____ COLLEGE: _____

PROJECT: (As listed on form for priority list of major capital improvements, 10-Year Construction Plan)

Type of Space	Standard[a] Large or Small		Weekly Student Contact Hours and FTE Instructional Staff: Actual Fall 1967	Weekly Student Contact Hours and FTE Instructional Staff: Projected	Total Need by Standards Assignable Square Feet: Fall 1967[g]	Total Need by Standards Assignable Square Feet: Projected[h]
(1)	(2)		(3)	(4)	(5)=(2)x(3)	(6)=(2)x(4)
COVERED BY SPACE STANDARDS:				For Date of Occupancy		For Date of Occupancy
1. Collegewide:						
a. Classroom and Seminar Rooms (101, 102 & 103)	67	___	_____ WSCH[c]	_____ WSCH[e]	_____ ASF	_____ ASF
b. Office (301, 302, 303 & 304)	140[b]	___	_____ FTE[c]	_____ FTE[e]	_____ ASF	_____ ASF
Totals (Items 1a & 1b)	XXX	XXX	XXXXXX	XXXXXX	_____ ASF	_____ ASF
2. Subject Fields (occupants of proposed project)				Projected For Two Years Beyond Date Of Occupancy		Projected For Two Years Beyond Date Of Occupancy
a. Teaching Labs & Teaching Lab Service (104 & 107)						
1200 Biological Sciences	260	___	_____ WSCH[d]	_____ WSCH[f]	_____ ASF	_____ ASF
2400 Mathematics	140	___	_____ WSCH[d]	_____ WSCH[f]	_____ ASF	_____ ASF
2600 Physical Sciences	280	___	_____ WSCH[d]	_____ WSCH[f]	_____ ASF	_____ ASF
3000 Social Sciences	140	___	_____ WSCH[d]	_____ WSCH[f]	_____ ASF	_____ ASF
6890 Other Trade Tech	352	___	_____ WSCH[d]	_____ WSCH[f]	_____ ASF	_____ ASF
Totals (Item 2a)	XXX	XXX	_____ WSCH	_____ WSCH	_____ ASF	_____ ASF
TOTAL COVERED BY STANDARDS (Items 1 & 2)	XXX	XXX	XXXXXX	XXXXXX	_____ ASF	_____ ASF

JCAF-29--contd.

FOOTNOTES--AREA NEEDS FOR DEPARTMENTS OF INSTRUCTION

a. Standards per CCHE, Space Utilization Standards, California Public Higher Education, No. 1027, September 1966.

   Note: Small, isolated junior colleges with less than 1,000 full-time students for at least five years as of May 1966 attending classes from 8 a.m. to 5 p.m. are allowed 20% additional space per weekly student contact hour for both classrooms and teaching laboratories. If small college allowance is used, show figures used by typing the figures in column 2 under the column titled "small".

b. "Small" junior colleges are allowed 160 assignable square feet (ASF) per Instructional FTE Staff.

c. Actual Collegewide non-laboratory (lecture and seminar) Weekly Student Contact Hours (WSCH) and Instructional FTE for Fall 1967.

d. Actual laboratory (teaching laboratory) WSCH for Fall 1967 of occupants of proposed project.

e. Projected Collegewide non-laboratory WSCH and Instructional FTE for (Fall) date of occupancy.

f. Projected laboratory WSCH of occupants of proposed project, by subject field, for two (2) years beyond date of occupancy.

g. The figures shown in column 5 are simply the products of column 2 multiplied by column 3.

h. The figures shown in column 6 are simply the products of column 2 multiplied by column 4.

FEDERAL FUNDS

Senate Bill 691 provides in Section 20081, as follows:

"20081. The review and evaluation of preliminary plans for a project by the Department of Education shall include the following elements:"

* * *

"(b) Determining the amount of federal funds available for the project, and taking appropriate measures to ensure that the project will qualify for the maximum amounts of federal funds practicable under the circumstances.

"'Federal funds' means any construction and equipment moneys provided by the federal government to a junior college district for the project or any part of the project, which are or will be available to the district for the project."

District: _____ College: _____

Project: _____

Source of Funds	(1) Funds Available For Project (Mark with an "X")	(2) Application For Available Funds		(3) Approval Of Application For Federal Funds	
		Date of Application	Amount	Date	Amount
Higher Education Facilities Act of 1963					
Higher Education Act of 1965 Title VI-A Title VI-B					
National Defense Education Act					
Public Law 815					
Vocational Education Act of 1963					
TOTAL					

* Senate Bill 691 states that the Department of Education shall determine the total cost of the project and reduce the same by the amount of federal funds. To the remainder will be applied the relative district ability to determine state and district share.

APPLICATION ASSURANCES AND AUTHENTICATION

1. All parts and exhibits contained in or referred to in the application are submitted with and made a part of this application.

2. The applicant hereby assures the California State Department of Education that:

   a. No part of the facility, or facilities, in the proposed project includes the planning or construction of dormitories, student centers other than cafeterias, stadia, the improvement of site for student or staff parking, or single-purpose auditoriums.

   b. All facilities included in the proposed project will be used as academic facilities.

   c. Any state funds received pursuant to the application will be used solely for defraying the development costs of the proposed project.

   d. Applicant has on hand, or is assured of obtaining, if the application is approved, sufficient funds to meet the non-state portion of the costs of constructing the facilities described in the application.

   e. If the application is approved, the construction covered by the application will be undertaken in an economical manner and will not be of elaborate or extravagant design or materials.

   f. Construction contracts for the construction covered by the application will incorporate the required "Fair Employment Practices" provisions, performance bonds, and all other requirements necessary to meet state regulations.

   g. Approval of the final working drawings and specifications will be obtained from both the California State Department of Education and the Office of Architecture and Construction before an allocation is made.

   h. No changes in construction plans which would alter the scope of work, functions, assignable instructional or library areas, utilities, or safety of the facility will be made without prior approval of the Department.

   i. Equipment not included in the basic construction contract will be procured by competitive bidding either by public advertising or by obtaining three or more bids, or other procurement methods required by state law.

   j. Applicant will cover all costs in excess of the amount provided for in the application.

   k. Adequate and separate accounting and fiscal records and accounts of all funds provided from any source to pay the cost of the proposed construction will be maintained, and audit of such records and accounts will be permitted at any reasonable time and/or at completion.

l. Architectural or engineering supervision and inspection will be provided at the construction site to insure that the completed work conforms with the approved plans and specifications, and "as-built" drawings will be made available to the Department of Education upon completion of the project.

m. The applicant has reviewed the academic and financial requirements for operation of the facilities upon their completion and considers the plan for operation of the facilities to be practical and within the capabilities of the district.

n. No contract will be awarded until the Public Works Board has given its approval.

3. The undersigned has been duly authorized by the applicant to file this application, to provide such additional information as may be required, and otherwise to act as the representative of the applicant in connection with this application, and certifies that all information contained in this application and attached supporting documents is true and correct to the best of his knowledge and belief.

IN WITNESS THEREOF, THE APPLICANT HAS CAUSED THIS APPLICATION TO BE DULY EXECUTED IN ITS NAME ON THE DATE SHOWN BELOW.

_____
(Legal Name of Applicant District)

_____ _____
(District Office Address) (Telephone Number)

The Governing Board of the District has approved the submission of this application to the State Department of Education.

_____
(President of the Board of Trustees)

_____ _____
(Date) (Secretary of the Board of Trustees)

ATTACH A COPY OF THE BOARD RESOLUTIONS.

APPENDIX

MAXIMUM LABORATORY SPACE STANDARDS
FOR PLANNING NEW LABORATORY AND SERVICE AREA FACILITIES, CALIFORNIA JUNIOR COLLEGES

Standard Classification Code	Subject Grouping	ASF/STN	ASF/100 WSCH[a]
1200	Biol. Sciences	55	260
2400	Mathematics	30	140
2600	Physical Sciences	60	280
3000	Social Sciences	30	140
4100	Art	65	305
4200	Drama	65	305
4300	English	40	190
4400	Foreign Languages	40	190
4500	Music	65	305
4800	Speech	40	190
4900	Other Humanities	40	190
6100	Agriculture	150	705
6200	Business	30	140
6400	Home Economics	60	280
6500	Applied Graphic Arts	80	375
6600	Health Services	50	235
6700	Pub./Pers. Serv.	50	235
6801	Aero. Tech.	175	820
6802	Air Conditioning	130	610
6803	Building Trades	175	820
6804	Ceramic Technology	40	190
6805	Chem. Technology	70	330
6807	Drafting Tech.	60	280
6808	Electrical Tech.	70	330
6809	Electro-Mechanical	100	470
6810	Electronic Technology	60	280
6811	Engin. Gen.	90	425
6812	Engin. Tech.	70	330
6814	Industrial Tech.	75	350
6815	Mechanical - Auto	200	940
6816	Metallurgical Tech.	65	305
6817	Metal Trades	130	610
6818	Textile Mech.	120	565
6819	Welding	90	425
6890	Other Trade Tech.	75	352

[a]Based on following Utilization Components:

	Hrs. Wk.		Stn. Occ.%		Stn. Use
Classrooms and Seminars:	34	x	.66	=	22.4
Laboratories:					
LD	25	x	.85	=	21.3

APPENDIX

STANDARDS AND GUIDELINES FOR OFFICE SPACE

	All Junior Colleges ASF/Instructional FTE	"Smaller"* Junior Colleges ASF/Instructional FTE
1. **Standards**		
Office space planning on college-wide basis	140	160
2. **Guidelines**		
Academic office, ASF/station	80	80
3. **Guidelines**		
Academic office plus other offices, ASF/Instructional FTE	105	110
4. **Guidelines**		
Academic office, ASF/teaching FTE	63	58

*"Smaller" for this purpose is defined as fewer than 1,001 students, and in existence for five years as of May 1966.

SUMMARY OF PROPOSED LIBRARY PHYSICAL PLANT STANDARDS
CALIFORNIA JUNIOR COLLEGES

1. Areas for reading stations--study hall and carrel (Rooms 401 and 402):

   a. 25 assignable square feet per station

   b. Number of stations:

      (1) 15-20 percent of estimated full-time enrollment (students taking 12 or more units), scheduled according to the relative emphasis of college curriculum on "trade-technical" instruction:

Stations As Percent of Full-time Enrollment	Percent of Total Student Credit Hours Devoted to "Trade-Technical" Courses
15	greater than 10
16	9 and 10
17	7 and 8
18	5 and 6
19	3 and 4
20	less than 3

      For example, a college which devoted more than 10 percent of total student credit hours offered to "trade-technical" instruction would plan for a sufficient number of study stations to seat 15 percent of anticipated full-time enrollment.

2. Housing the collection--stack (Rooms 403 and 404):

   a. .10 assignable square feet (ASF) per volume (of which approximately 75 percent would house bound items, with 25 percent for unbound items)

3. Staff/Service areas (Room 405):

   a. The basic complement allowance is 400 square feet which is augmented by 140 square feet for each full-time staff equivalent which includes professional, clerical, and student assistance.

APPENDIX

WORK SHEET FOR FIGURING FTE INSTRUCTIONAL STAFF AND FTE TEACHING STAFF FOR "OFFICE STANDARDS"
(These figures are to include staff for graded junior college day and extended day classes.)

NOTICE: It should be helpful to complete Column (h) first, and then tie all lines across to the total of each category.

College Staff[1] (All certificated personnel, including extended day classes, divided into the following categories) (a)	FTE Teaching Time[2] (b)	FTE Preparation Time[2] (c)	Total FTE Teaching Staff[2] (d)	FTE Other Than Preparation and Teaching Time[2] (e)	FTE Instructional Staff[2] (f)	FTE Other Than Preparation and Teaching Time[2] (g)	Total FTE College Staff (All certificated personnel, including extended day classes)[2] (h)
Instructors							
Counselors							
Department Administrators							
Librarians (and similar titles such as Director of Audio-Visual)							
Institutional Administrators (includes individuals with responsibilities covering the entire institution, as indicated by such titles as Superintendent, Assistant Superintendent - Business or Instruction, President, Dean of Instruction, Director of Data Processing, Director of Research, etc.)							
Student Administrators (includes individuals with such titles as Director of Admissions, Placement Director, School Nurse, etc.)							
Totals							
Total of Column (d) is FTE Teaching Staff Total of Column (f) is FTE Instructional Staff							

Make certain that all college staff, including extended day, are reported.

All columns from (b) to (h) are to be stated in fractions of a person (example: $\frac{1}{4}$ teaching time of a full-time employee is $\frac{1}{4}$ person).

California State Department of Education
Bureau of Junior College Administration and Finance

SPACE ADEQUACY SURVEY, STUDENT AND STAFF DISTRIBUTION IN EDUCATIONAL PLANNING

Educational planning of the physical plant means looking to the future and foreseeing the types and kinds of programs the institution should offer, the number and distribution of students who will attend, the limitations and environment which the institution will encounter, and in the light of these factors, to propose the amount and type of facilities which should be provided to meet these needs.

With educational planning well in hand, other types of planning can proceed. Among these are financial (i.e., ten-year construction plan), and architectural planning.

Educational planning necessitates the gathering, analyzing, and interpretation of all information which has a bearing on the problem. It takes on particular importance when its findings are to be used as the basis of new facility or the development of a capital outlay program. The implication here is that good planning, based on the data gathered and which when evaluated in the light of goals and objectives to be reached and based on the orderly presentation of the data gathered, will lead inevitably to sounder and better planning.

It is the function of the Space Adequacy Survey Forms to provide objective methods of measuring facility needs. These objective methods are extant; are based on the application of standards, and require that the long-range departmental teaching programs be described in terms which can be translated directly into quantitative measurements of proposed teaching and administrative activities. The ideal educational planning should culminate in an estimate of the space requirements represented in an authoritatively prognosticated educational program -- complete with the definitions all the way down the line to estimated courses, course enrollments,

number and section size, and schedules of each department existing or contemplated in the ultimate development of the campus.

Basically then, campus planning is the projection of the long-range academic program and its necessary adjuncts (utilities, landscaping, parking, traffic circulation, etc.) into the physical development plans which we call the Master Development Plan of the campus.

INSTRUCTIONS FOR THE PREPARATION OF CALIFORNIA JUNIOR COLLEGE
SPACE ADEQUACY SURVEY, STUDENT AND STAFF DISTRIBUTION
(Form JCAF-20 (Rev. 8/67)--PART A, B, and C)

California Junior College Space Adequacy Survey (Form JCAF-20, Rev. 8/67)

Ideally, a quantitatively projected Student (WSCH) and Staff (FTE) load distribution is for (1) the current Fall semester and (2) each successive year of a long-range construction plan. It would serve not only for the purposes of capacity analysis of the campus' and/or district's proposed ten-year construction plan, but also for the subsequent purpose of the translation of these quantitative data into space programs, preliminary architectural plans, and, ultimately, working drawings.

The "student distribution" referred to in this set of forms is the distribution of WSCH among subject fields (and departments) by type of class (i.e. non-laboratory and laboratory) for each year (e.g., 1967 through 1977). The total WSCH instructional load (i.e., including Physical Education) should be in agreement with the State Department of Finance Form BD-240-Supplement, "Provisional Ten-Year Capital Outlay Junior College Projections."

I. PART A, STUDENT AND STAFF DISTRIBUTION, is to be completed in the following manner:

Department Teaching Station Activities, by Subject Field: Enter the specific details for each department which can then be summarized by subject field (using the subject field groupings as shown in Appendix, page A-1) for this form, "PART A, STUDENT AND STAFF DISTRIBUTION."

Column 1, No. of (FTE) Instructors: Enter the number of FTE instructors for each subject field using the computation method shown in the work sheet in Appendix, page A-4, and coordinate unit values and teaching-load with faculty-load policy.

Column 2, Percent of Student-Contact-Hours Per Week: This column, for each subject-field, is the total WSCH (of Columns 4A through 4E) within each subject-field, divided by the total WSCH (Columns 4A through 4E) for all (i.e., total campus) subject-fields.

Columns 3A and 3B, No. of Lecture- or Laboratory-Sections: The total number of sections for each course (or sub-group of courses) and a sub-total for the whole subject field will be entered in this column. Each group of students scheduled (as in a separate room) will be counted as one section.

Column 3C, Class-Hours-Per-Week: The total weekly number of scheduled class-hours for all lecture-sections (Column 3A) and laboratory sections (Column 3B). The lecture class-hours-per-week may be shown separate from the laboratory class-hours-per-week by placing a slash mark (/) between the two figures (e.g., 3/12).

Column 3D, Class-Section Size: Average enrollment per section for each type of class (lecture or laboratory). The lecture class may be shown separate from the laboratory-class-hours by placing a slash mark (/) between the two figures (e.g., 60/30).

Columns 4A through 4E, Weekly Student-Contact-Hours: The weekly student-contact-hours (WSCH) are computed by multiplying class-hours-per-week (Column 3C) by the class-section size (Column 3D); for example, the figures cited under Column 3C (3/12) and Column 3D (60/30) above would compute to 180 (3 x 60) WSCH for class- or lecture-rooms and the figure (180) listed under the appropriate Column 4A, 4B, 4C, or 4D. The laboratory WSCH figure (for Column 4E) would compute to 360 (12 x 30) WSCH.

Columns 5 through 8E: Use same instructions as shown above for Columns 1 through 4E.

COMMENT: A note of caution should be made here regarding significant changes in percentages shown in Column 2 when compared with percentage figures shown in Column 6 and the percentages shown in future projections. Reviewing authorities will want to know the reasoning behind any significant changes, particularly if the changes are then reflected in needs caused by overbuilding in one subject-area.

II. PART B, GENERAL CLASS--LECTURE (green color form) and PART C, LABORATORY--SHOP (yellow color form) are to be completed in the following manner:

Subject-Field Area: Enter the department and subject-field as subtotaled from PART A (Student and Staff Distribution).

Column 1, WSCH Distribution (from PART A): Enter the distribution of weekly student-contact-hours (WSCH) of lecture (PART B) and laboratory (PART C) derived from the WSCH taken from Columns 4A through 4D or Columns 8A through 8D (for Class--Lecture) and Column 4E or Column 8E (for Laboratory--Shop) of PART A.

The total for Column 1 for PART B plus PART C should be 100% + or — .5 of 1%.

Column 2, ASF/100 WSCH Per CCHE Formula: Enter the Coordinating Council for Higher Education (CCHE) standards of assignable square-feet per 100 WSCH for the type of facility (i.e., classroom or teaching-laboratory) using the standard subject-field groupings for laboratories as shown in Appendix, page A-1, attached.

Column 3, Computed ASF for Each Subject Area: Derived by dividing Columns 2 figure by 100 and multiply quotient by Column 1 figure.

Column 4, ASF Per Student-Station, CCHE Formula: Enter the standard ASF per student-station allowed for in each type of space (classroom or teaching-laboratory); and in the case of teaching-laboratories, by subject-field. (Also, see Appendix, page A-1, attached.)

Column 5, Total Number of Student-Stations Needed: Divide Column 3 by Column 4.

Column 6, Number of Adequate Student-Stations Existing: Enter here, the number of student-stations available (using current space inventory Form P-1), taking into account the "secondary effects" (i.e., the introduction, transfer, or demolition of student-stations).

Column 7, Number of Additional Student-Stations Needed: Enter the figure obtained by subtracting Column 6 from Column 5.

Column 8, Number and Capacity of Additional Teaching-Spaces Needed: The top figure in each column represents the station capacity (i.e., 30-station, 40-station, etc.) desired of a particular facility (based on Column 3D or Column 7D, of PART A). The lower figure in each column represents the number of spaces less any existing spaces in that size-range, and is computed from the "class-hours-per-week" (in that size-range) as shown in Column 3C or Column 7C, of PART A. For example, divide total non-laboratory (classroom and seminar) class-hours-per-week by 22.4 and subtract the existing spaces in that size-range (upper figure) to obtain the entry for the lower figure (green form). Divide the total laboratory class-hours-per-week by 21.3 and subtract the existing spaces in that size-range (upper figure) to obtain the entry for the lower figure (yellow form).

	---	---	---	---
*	30	40	90	120
**	1.41	0.13	0.40	0.80
	---	---	---	---

*Upper figure: Size-range taken from "class-section size", Column 3D or Column 7D, PART A.

**Lower figure: Number of spaces taken from Column 3C or Column 7C, PART A.

Example: From total of Physical Sciences (see sample, green form, attached), a total of 54 weekly student-hours are scheduled in classrooms in the "30" size-range; therefore, 54/22.4 = 2.41. The 2.41 less one (1) existing classroom in the "30" size-range equals 1.41 additional rooms required. A total of 3 weekly student-hours are scheduled in classrooms in the "40" size-range; therefore, 3/22.4 = 0.13. Since there are no existing classrooms in the "40" size-range, the figure 0.13 is used. Like calculations are made for each of the other ranges listed.

Column 9, Additional Student-Station-Capacity Provided by (8): Enter the total number of additional student-stations to be provided by the number and size-range of the additional spaces listed in Column 8 (i.e., the sum of the products of the upper figure and lower figure in each divided space in Column 8).

Column 10, Total Student-Stations Available and to Be Provided: This is the sum of Column 6 and Column 9, and should be compared to Column 5. Since the CCHE standards provide for reasonable room-use, it is expected that Column 10 figures should generally be within (rather than more than) the Column 5 figures.

Column 11, Additional Assignable Square-Feet Needed: The entry in this column will be the product of the "ASF per Student-Station" value in Column 4 and the "Additional Student-Station-Capacity Provided by (8)" value in Column 9.

Column 12, Spaces Needed Not Covered by Standards: This column is reserved as the necessary "catchall" for space not covered by the standards. This column should be used to indicate the total area (assignable square-feet) of such spaces as: office space; language laboratory; music practice;

music studio; animal quarters; greenhouse; Library and Museums, General Service (i.e., Food Service, Health Service, Lounge, Merchandising Service, Locker, Audio-Visual and Audio-Visual-TV; and other nonresidential space (i.e., Shop, Storage, Field Building, and Miscellaneous).

APPENDIX

MAXIMUM LABORATORY SPACE STANDARDS FOR PLANNING NEW LABORATORY AND SERVICE AREA FACILITIES, CALIFORNIA JUNIOR COLLEGES

Standard Classification Code	Subject Grouping	ASF/STN	ASF/100 WSCH[a]
1200	Biol. Sciences	55	260
2400	Mathematics	30	140
2600	Physical Sciences	60	280
3000	Social Sciences	30	140
4100	Art	65	305
4200	Drama	65	305
4300	English	40	190
4400	Foreign Languages	40	190
4500	Music	65	305
4800	Speech	40	190
4900	Other Humanities	40	190
6100	Agriculture	150	705
6200	Business	30	140
6400	Home Economics	60	280
6500	Applied Graphic Arts	80	375
6600	Health Services	50	235
6700	Pub./Pers. Serv.	50	235
6801	Aero. Tech.	175	820
6802	Air Conditioning	130	610
6803	Building Trades	175	820
6804	Ceramic Technology	40	190
6805	Chem. Technology	70	330
6807	Drafting Tech.	60	280
6808	Electrical Tech.	70	330
6809	Electro-Mechanical	100	470
6810	Electronic Technology	60	280
6811	Engin. Gen.	90	425
6812	Engin. Tech.	70	330
6814	Industrial Tech.	75	350
6815	Mechanical - Auto	200	940
6816	Metallurgical Tech.	65	305
6817	Metal Trades	130	610
6818	Textile Mech.	120	565
6819	Welding	90	425
6890	Other Trade Tech.	75	352

[a]Based on following Utilization Components:

	Hrs. Wk.		Stn. Occ.%		Stn. Use
Classrooms and Seminars:	34	x	.66	=	22.4
Laboratories:					
LD	25	x	.85	=	21.3

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S A M P L E

CALIFORNIA JUNIOR COLLEGE SPACE ADEQUACY SU

College District WESTWARD HO

College Campus MOSSY-DELL

FOR COLLEGE YEAR 1967-68 (18,050 WSCH)

Department Teaching Station Activities (By Subject Field)	(1) No. of (FTE) Instructors	(2) % of Student Contact Hours Per Week	(3) Teaching Stations (3A) No. of Lect. Sections	(3B) No. of Lab Sections	(3C) Class Hrs. Per Week	(3D) Class Section Size	(4) Weekly Student Contact Hours Class or Lecture Rooms (4A) Small Class (e.g. 25)	(4B) Larger Class (e.g. 45)	(4C) Small Lecture (e.g. 90)	(4D) Larger Lecture (e.g. 250)	Lab (4E) Lab, Shop, etc.	(5) No. of (FTE) Instructors
Chemistry 1A			1	2	3/12	60/30			180		360	
Chemistry 1B			-	-								
Chemistry 2			1	3	3/9	90/30			270		270	
Chemistry 5			1	1	2/3	30/30		60			90	
Chemistry 8			-	-								
Chemistry 12A			-	-								
Subtotal Chemistry	1.4	6.8	3	6	8/24	90/30		60	450		720	5.5
Geology 1A			1	2	3/6	60/30			180		180	
Geology 1B			-	-								
Geology 3			-	-								
Geology 10			1	-	3/-	30/-		90			-	
Subtotal Geology	.6	2.5	2	2	6/6	60/30		90	180		180	2.2
Physics 1A			-	-								
Physics 1B			-	-								

A M P L E

PART A

OR COLLEGE SPACE ADEQUACY SURVEY

STUDENT AND STAFF DISTRIBUTION

ge Campus MOSSY-DELL

Date October 6, 1967

-68 (18,050 WSCH)				FOR COLLEGE YEAR 1971-72 (76,700 WSCH)											
(4)				(5)	(6)	(7)				(8)					
Student Contact Hours						Teaching Stations				Weekly Student Contact Hours					
Lecture Rooms			Lab							Class or Lecture Rooms				Lab	
B)	(4C)	(4D)	(4E)			(7A)	(7B)	(7C)	(7D)	(8A)	(8B)	(8C)	(8D)	(8E)	
Class (e.g. 45)	Small Lecture (e.g. 90)	Larger Lecture (e.g. 250)	Lab, Shop, Etc.	No. of (FTE) Instructors	% of Student Contact Hours Per Week	No. of Lect. Sections	No. of Lab Sections	Class Hrs. Per Week	Class Section Size	Small Class (e.g. 25)	Larger Class (e.g. 45)	Small Lecture (e.g. 90)	Larger Lecture (e.g. 250)	Lab, Shop, Etc.	
	180		360			2	8	6/48	120/30				720	1440	
						1	2	6/12	120/30				720	360	
	270		270			2	8	6/24	120/30				720	720	
60			90			1	1	2/3	30/30		60			90	
						1	3	3/9	30/30		90			90	
						1	3	3/9	30/30		90			270	
60	450		720	5.5	7.0	8	25	26/105	120/30		240		2160	2970	
	180		180			2	6	6/18	90/30			540		540	
						1	3	3/9	90/30			270		270	
						2	2	4/12	30/30		120			360	
90			-			1	-	3/-	40/-		120				
90	180		180	2.2	2.9	6	11	16/39	90/30		240	810		1170	
						2	2	6/6	30/30		180			180	
						1	1	3/3	30/30		90			90	

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CALIFORNIA JUNIOR COLLEGE SPACE ADEQUACY

College District Westwood Ho

College Campus Mossy-Dell

FOR COLLEGE YEAR 1967-68 (18,050 WSCH)

Department Teaching Station Activities (By Subject Field)	(1) No. of (FTE) Instructors	(2) % of Student Contact Hours Per Week	(3) Teaching Stations (3A) No. of Lect. Sections	(3B) No. of Lab Sections	(3C) Class Hrs. Per Week	(3D) Class Section Size	(4) Weekly Student Contact Hours Class or Lecture Rooms (4A) Small Class (e.g. 25)	(4B) Larger Class (e.g. 45)	(4C) Small Lecture (e.g. 90)	(4D) Larger Lecture (e.g. 250)	Lab (4E) Lab, Shop, Etc.	(5) No. of (FTE)
Physics 1C			-	-								
Physics 1D			-	-								
Physics 2A			1	1	3/3	30/30		90			90	
Physics 2B			-	-								
Physics 10A			2	2	6/6	30/30		180			180	
Physics 10B			-	-								
Physics 11B			-	-								
Physics 45A			-	-								
Subtotal Physics	1.4	3.0	3	3	9/9	30/30		270			270	4
Total Physical Sciences	3.4	12.3	8	11	23/39	90/30	-	420	630	-	1170	11

S A M P L E (continued)

PART A

COLLEGE SPACE ADEQUACY SURVEY

STUDENT AND STAFF DISTRIBUTION

Campus Mossy-Dell

Date October 6, 1967

68 (18,050 WSCH)				FOR COLLEGE YEAR 19 71-72 (76,700 WSCH)										
(4)				(5)	(6)	(7)				(8)				
tudent Contact Hours						Teaching Stations				Weekly Student Contact Hours				
Lecture Rooms			Lab							Class or Lecture Rooms				Lab
(4B)	(4C)	(4D)	(4E)			(7A)	(7B)	(7C)	(7D)	(8A)	(8B)	(8C)	(8D)	(8E)
(e.g. 45)	Small Lecture (e.g. 90)	Larger Lecture (e.g. 250)	Lab, Shop, Etc.	No. of (FTE) Instructors	% of Student Contact Hours Per Week	No. of Lect. Sections	No. of Lab Sections	Class Hrs. Per Week	Class Section Size	Small Class (e.g. 25)	Larger Class (e.g. 45)	Small Lecture (e.g. 90)	Larger Lecture (e.g. 250)	Lab, Shop, Etc.
						1	1	3/3	30/30		90			90
						1	1	3/3	30/30		90			90
0			90			2	2	6/6	30/30		180			180
						1	1	3/3	30/30		90			90
0			180			2	2	6/6	30/30		180			180
						1	1	3/3	30/30		90			90
						2	2	6/6	30/30		180			180
						1	1	3/3	30/30		90			90
70			270	4.2	3.1	14	14	42/42	30/30		1260			1260
20	630	-	1170	11.9	13.0	28	50	84/186	120/30	-	1740	810	2160	5400

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CALIFORNIA JUNIOR COLLEGE SPACE ADEQUACY SU

College District WESTWARD HO

College Campus MOSSY-DELL

Subject Field Area	(1) WSCH Distribution (From Part A)	(2) ASF/100 WSCH Per CCHE Formula	(3) Computed ASF For Each Subject Area	(4) ASF Per Student Station CCHE Formula	(5) Total Number Student Stations Needed	(6) Number Of Adequate Student Stations Existing	(7) Number Of Additional Student Stations Needed	Nu Ca Ad T Spa
Chemistry	2400	67	1608	15	107	0	107	30 36
Geology	1050	67	704	15	47	0	47	30 18
Physics	1260	67	844	15	56	1 @ 30	26	30 87
Total Physical Sciences	4710	67	3156	15	210	1 @ 30	180	30 141

L E

PART B

GE SPACE ADEQUACY SURVEY

GENERAL CLASS--LECTURE

s MOSSY-DELL

Date October 6, 1967

(6) ber Of quate ent tions sting	(7) Number Of Additional Student Stations Needed	(8) Number And Capacity Of Additional Teaching Spaces Needed				(9) Additional Student Station Capacity Provided By (8)	(10) Total Of Student Stations Available And To Be Provided	(11) Additional Assignable Square Feet Needed (4) x (9)	(12) Spaces Needed Not Covered By Standards
0	107	30 36	---	---	120 .804	107	107	1605	
0	47	30 .18	40 .13	90 .40	--- ---	47	47	705	
@ 30	26	30 .87	---	--- ---	--- ---	26	56	390	
@ 30	180	30 1.41	40 .13	90 .40	120 .80	180	210	2700	
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S A M P L E

CALIFORNIA JUNIOR COLLEGE SPACE ADEQUACY SU

College District WESTWARD HO

College Campus MOSSY-DELL

Subject Field Area	(1) WSCH Distribution (From Part A)	(2) ASF/100 WSCH Per CCHE Formula	(3) Computed ASF For Each Subject Area	(4) ASF Per Student Station CCHE Formula	(5) Total Number Student Stations Needed	(6) Number Of Adequate Student Stations Existing	(7) Number Of Additional Student Stations Needed	Nu Ca Ad T Spa
Chemistry	2970	280	8316	60	139	2 @ 30	79	30 2.6
Geology	1170	280	3276	60	55	30	25	30 .83
Physics	1260	280	3528	60	59	30	29	30 .97
Total Physical Sciences	5400	280	15120	60	253	120	133	30 4.40

PART C

A M P L E

LABORATORY--SHOP

IOR COLLEGE SPACE ADEQUACY SURVEY

ege Campus MOSSY-DELL Date October 6, 1967

(5) al ber dent ions ded	(6) Number Of Adequate Student Stations Existing	(7) Number Of Additional Student Stations Needed	(8) Number And Capacity Of Additional Teaching Spaces Needed				(9) Additional Student Station Capacity Provided By (8)	(10) Total Of Student Stations Available And To Be Provided	(11) Additional Assignable Square Feet Needed (4) x (9)	(12) Spaces Needed Not Covered By Standard
9	2 @ 30	79	30/2.6	---	---	---	78	138	4680	
55	30	25	30/.83	---	---	---	25	55	1500	
59	30	29	30/.97	---	---	---	29	59	1740	
53	120	133	30/440	---	---	---	131	251	7920	
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